


# Personalised Display Advertising and Online Purchase Intentions: The Moderating Effect of Internet Use Motivation

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## ABSTRACT

Personalized ads are increasingly used by marketers to promote product and service brands; however, the effect of ad personalization on consumer perceptions and online purchase intention has received limited research attention, particularly in different media usage situations. To address this gap, data were collected in four sub-Saharan African countries through an online survey to test the hypothesized model using structural equation modeling. The findings indicate that perceived ad personalization influences online purchase intention, and this relationship is partially mediated by perceived relevance and fully mediated by perceived intrusiveness. No effects were found for privacy concern. Notably, internet use motivation moderated the relationships between the predictor and the outcomes. Specifically, the effect of ad personalization on perceived intrusiveness was only significant among paratelic users; its effect on purchase intention was also stronger among paratelic users, and its effect on perceived relevance was more pronounced among telic users.

## KEYWORDS

Emerging Markets, Internet Usage Motive, Online Advertising, Online Purchase Intention, Personalisation, Sub-Saharan Africa

## INTRODUCTION

The pervasiveness of the internet and the constant surge in internet usership makes the online environment an essential place for businesses to promote their products and brands. As at the second quarter of 2020, more than half (62 per cent) of the global population are said to be online – are internet users – indicating a 1,239 percent growth over the past two decades (Internet World Stats, 2020). More importantly, an estimated 1.92 billion people made online purchases in 2019, and online sales amounted to over \$3.5 trillion accounting for 14.1 per cent of retail sales globally (Clement, 2020). Also, electronic retail revenues are expected to reach \$6.54 trillion by 2022 (Statista, 2020), a projection that presupposes an increase in online shopping which is one of the most prevalent online activities worldwide. For this reason, most retailers are shifting their advertising efforts online. With increasing developments in targeting technologies, personalized display advertising has experienced tremendous growth. Although industry reports show that marketers and retailers are allotting portions of their budgets to personalized advertising (Guttman, 2019) in order to enhance the effectiveness of

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their ads, they still face challenges regarding ways in which personalization efforts can be optimized to the benefit of consumers.

Notwithstanding the prevalence of personalized advertising, theoretical insights regarding its influence on consumer responses and decision-making is still embryonic (Bang & Wojdyski, 2016). Besides, extant prior studies have reported ambivalent findings concerning the effectiveness of personalized ads. Such studies have addressed the positive effects of personalization through mechanisms such as perceived relevance or usefulness (De Keyzer et al., 2015), as well as its negative effects explained by privacy concern and perceived intrusiveness (Baek & Morimoto, 2012; Tucker, 2014; Aguirre et al., 2016). Nonetheless, the literature seems limited in providing understanding of the circumstances under which the effects of personalization explained by these mechanisms may vary. Rodgers and Thorson (2000) argue that, to understand how consumers respond to advertising, it is vital to understand why they use a medium. Although people have diverse reasons for using the internet, prior studies have not examined the effects of personalization in different media usage situations. One plausible reason identified as accounting for this limitation is that, recent relevant studies that have inquired into online ad personalization with the exception of a few (Bleier & Eisenbess, 2015a; Bang & Wojdyski, 2016) have focused on social networking sites or social media platforms (e.g. De Keyzer et al., 2015; Tran, 2017; Dhanya and Jaidev, 2019) and mobile advertising (e.g., Kim & Han, 2014; Feng et al., 2016). Even though valuable, these specific focuses, limit the possibility of capturing responses of individuals with differing internet usage motive. Display ads can be seen on diverse sites including social networking sites, commercial websites, blogs, news sites etc. By focusing on personalization in the context of display advertising, this study provides added insight on how consumer motivation for internet usage may function as a contingency factor causing variations in their perceptions and online purchase intentions. Generally, studies show that when consumers are persuaded by advertising message, they form the desire or intention to purchase the advertised product or brand (Goodrich, 2013). In the online setting, shopping is considered the third most popular activity after emailing and surfing (Jamali et al., 2014) which underscores the importance of online purchase intention in examining the effects of personalized display ads.

As its aim, the current study explores the facilitating role of perceived relevance, intrusiveness and privacy concern in the associative link between ad personalization and online purchase intention. This is based on the assumption of the stimulus organism response (S-O-R) paradigm that, the internal responses (O) elicited by exposure to environmental cues (stimuli) serve as interveners in the relationship between the stimulus and specific behavioral responses (R) (Mehrabian & Russell, 1974). Complementarily, drawing on the telic/paratelic dimension of the reversal theory, the study as well examines whether the effects of ad personalization on these internal mechanisms and the behavioral intention of consumers to make an online purchase, would be moderated by their internet use motivation – telic (shopping and (re)searching) vs. paratelic (surfing and communication). The study focused on consumers in four sizeable emerging economies with huge consumer markets (South Africa, Nigeria, Ghana and Kenya) in the sub-Saharan African region. These markets have seen remarkable growth in terms of online retailing and online advertising uptake and also represent countries where diverse international brands and products have presence (Masekesa, 2020; Digital Content Africa, 2017). It is believed that evidence from these settings will progress understanding of advertising influences and online consumer behavior in order to advance theory. The rest of the paper proceeds as follows. The next section discusses the hypothesized model, followed by methodology, and results from the data analysis. The final section presents a general discussion detailing implications for theory and practice as well as limitations and directions for future research.

## HYPOTHESIZED MODEL

### Perceived Ad Personalization

The literature on personalization makes a distinction between actual ad personalization and perceived ad personalization. Personalized advertisements are ads that match promotional messages to individual consumers on the basis of their unique preferences (Li et al., 2019) as well as demographics and browsing/shopping-related information (Bang & Wojdyski, 2016), self-identifying information (Tucker, 2014) and location-based information. Perceived ad personalization, however, describes whether consumers perceive the ad message as matching their interest and preferences etc. It is argued by earlier studies (e.g., Simonson, 2005) that a personalized message can be perceived as generic by some consumers and the opposite is as well possible, and so, perceived personalization has been proven to be more vital than actual personalization and is regarded as the underlying mechanism that drives the effectiveness of an advertising message (Li, 2016; Tran, 2017). In light of this, the current study focuses on consumers' perceived personalization of display ads to which they are exposed while online.

Advertising messages are generally perceived as helpful in making purchase decisions and this perception is amplified in the context of personalized ads (Ha & Janda, 2014). For instance, in an early study, Howard and Kerin (2004) showed that when an ad contained viewers' name, the likelihood that they may form intentions to purchase the advertised product was high. With the ample product and service alternatives available online, tailored messages, from the perspective of information processing, are found to streamline the decision processes of consumers by lessening information overload (Jun & Holland, 2012) and are also perceived as offering some form of added/superior value (Simonson, 2005). Other studies in the context of display advertising have also demonstrated that ads that provide a match with the preferences of consumers, attract their attention and increase their purchase intentions (Goldfarb & Tucker, 2011; Bang & Wojdyski, 2016). As such, this study posits that:

H1. Consumers' perceived personalization of display ads positively influences their online purchase intentions.

### Perceived Relevance

According to Celsi and Olson (1988), perceived relevance is the degree to which consumers feel a personalized advertisement is self-related or in some way instrumental in achieving their personal goals and values. The core idea of personalization suggests that the products and services being advertised are related to consumers' peculiarities (Jung, 2017). And so, consistent with the concept of self-referencing (a process in which an ad's relevance is applied to oneself in order to judge its usefulness) (Tam & Ho, 2006), consumers are inclined to see personalized ads as suitable for them – self-relevant – since it uses information about them and matches some aspects of their lives. Consumers also consider as useful ads that are adapted to their individual interests and needs as well as personal information (Bleier & Eisenbeiss, 2015b), because such ads help simplify their choice decisions. As such, this study expects a positive effect of perceived ad personalization on perceived relevance.

It is as well argued that perceived relevance of ad messages plays an essential part in engendering positive advertising influences in cognitive, affective and behavioral terms (Jung, 2017). Past research suggests that self-referencing enhances decision-making and influences changes in consumer behavior (Tam & Ho, 2006; De Keyzer et al., 2015; Zhu & Chang, 2016). It is reasoned that self-relevance incites viewers to be attentive to ad messages, elaborate such messages which then heightens persuasion effects (Bright & Daugherty, 2012). Considered as a catalyst for positive behavioral responses toward personalized ad effectiveness, perceived relevance has been demonstrated to heighten intentions of consumers to purchase advertised products and also, online impulse buying tendencies among social media users (Dodoo & Wu, 2019). The self-relevance of ad messages derived from perceptions of ad

personalization is predicted to influence and increase consumer intentions to purchase the advertised offering online. Therefore, the following hypotheses are put forth:

- H2. Consumers' perceived personalization of display ads positively influences their perceived relevance of such ads.
- H5. Consumers' perceived relevance of display ads positively influences their online purchase intentions.
- H8. Perceived relevance mediates the relationship between perceived ad personalization and online purchase intention.

### **Perceived Intrusiveness**

Perceived intrusiveness describes the cognitive assessment of the extent of an ad's disturbance of a consumer's ongoing cognitive process or interference with his or her goals (Edwards et al., 2002). It also refers to the psychological reaction towards advertising that elicits feelings of annoyance or irritation, and the manifestation of a mechanism by which an advertisement evokes emotional reactions in the viewer (Li et al., 2002). This study argues that perceived ad personalization may impact consumers perception of intrusiveness because to tailor ads, use of personal information becomes necessary, which requires an unwelcome level of insights regarding consumers' interest and behaviors (Tucker, 2014). While Bang and Wodjinski (2016) found no evidence to support the effect of ad personalization on task interruption or as an impediment to goal achievements, other studies have linked perceptions of intrusiveness (as a consequence) to personalized ads from other perspectives (De Keyzer et al., 2018). For instance, ads that use more personal or private information (e.g. consumers' name or transaction information) or reflect too closely consumers exact preferences, stimulate feelings of discomfort or disconcertion and increase perceptions of intrusiveness particularly, when consumers can't find valid reasons for the use of their personal information (van Doorn & Hoekstra, 2013; Bleier & Eisenbeiss, 2015a).

Perceptions of intrusiveness may also influence consumers' purchase intention, predicated on the notion that intrusiveness can generate negative emotions such as frustration and annoyance, which may result in unfavorable consumer reactions (Li et al., 2002). Extant advertising research have demonstrated that increased intrusiveness can cause unfavorable evaluations and behavioral intentions regarding the source as well as negative brand responses (McCoy et al., 2008; De Keyzer et al., 2018). Specifically, van Doorn and Hoeskstra (2013) in their study, revealed that higher levels of intrusiveness negatively influenced purchase intentions. Other studies (e.g., Pfiffelmann et al., 2020) also point out that when an ad arouses feelings of uneasiness and displeasure, consumers may shy away from engaging with the ad and/or behave in ways that are contrary to the advertiser's expectation. It is therefore argued that, to the extent that personalized ads are perceived as intrusive, they will exert negative influence on purchase intention. The following hypotheses capture the proposition regarding perceived intrusiveness:

- H3. Consumers' perceived personalization of display ads positively influences their perceived intrusiveness of such ads.
- H6. Consumers' perceived intrusiveness of display ads negatively influences their online purchase intentions.
- H9. Perceived intrusiveness mediates the relationship between perceived personalization and online purchase intention.

### **Privacy Concern**

According to Baek and Morimoto (2012), consumers sense privacy threats when there is a "potential invasion of the right to prevent the disclosure of personal information to others" (p. 63). To be

effective, personalized ads are designed to match as closely as conceivable, the interests and needs of target consumers, which evokes and heightens privacy concerns (Tucker, 2014; Jung, 2017) because consumers remain oblivious to the tracking of their activities until they are exposed to ads tailored to their individual interests (Aguirre et al., 2016). Illustratively, an ad about a product a consumer had earlier searched for or placed on their wish list on a previously visited website, may be helpful, but is also likely to raise consumers' concern for privacy triggered by the knowledge that unauthorized parties have access to their personal information and online behavioral data.

Empirical findings concerning privacy concern have supported its effect on the behavioral reactions of consumers in the broad context of internet commerce. In the domain of behavioral advertising, privacy concern lessened consumers intention to click on ads (Kim & Huh, 2017). Other previous studies have also established that consumers' privacy concerns and their purchase behaviors online are negatively associated, because most internet users have misgivings concerning buying products online, owing to insecurities about their private and transaction information (Dinev & Hart, 2005). Largely, if personalization makes a display ad increase consumers' privacy concern, it will lessen their intentions to purchase the advertised product. Accordingly, it is hypothesized that:

- H4. Consumers' perceived personalization of display ads positively influences their privacy concerns toward such ads.
- H7. Consumers' privacy concern toward display ads negatively influences their online purchase intentions.
- H10. Privacy concern mediates the relationship between perceived personalization and online purchase intention.

### **Moderating Role of Internet Use Motivation**

Meta-motivational states according to reversal theory (Apter, 1984) can be categorized as telic (serious-minded or goal-directed) and paratelic (playful-minded or experiential). These motivational states affect the online behaviors of internet users in the sense that when an individual has a specific task to undertake (e.g. download a file or buy a product), they make goal-driven decisions and engage in directed search activities. Conversely, when an individual is experientially motivated (e.g. browsing an entertainment blog), they engage in non-directed search and focus on fun-driven decisions. Past studies have demonstrated that telic and paratelic users respond differently to online advertisements (Jung et al., 2014; Seyedghorban et al., 2016). According to Jung et al. (2014), telic users form highly positive attitudes toward online ads with low levels of interactivity whereas those in a paratelic state develop positive attitudes toward ads with low interactivity levels. Also, Seyedghorban et al. (2016) in their study showed that the effects of predictors such as perceived goal impediment, and prior negative experience on ad avoidance differed among telic and paratelic users.

Springing on the findings of these previous studies, this current study argues that internet use motivation moderates the relationship between ad stimulus (perceived ad personalization) and the internal responses (perceived relevance, intrusiveness and privacy concern) as well as the external response (purchase intention) of consumers. In other words, the direction and intensity of these personalization effects are expected to vary across the two user groups. Since personalization is based on personal and behavioral data as well as preferences and interests (Li et al., 2019; Bang & Wojdyski, 2016), its effect on purchase intention, perceived relevance and privacy concern is also anticipated to be stronger in the case of telic users. Because this user group is made up of shoppers and information seekers who are assumed to have high goal-orientation, they may derive higher levels of relevance from such ads based on the self-referent, useful and informative content. Also, telic users are characterized as serious-minded compared to the playful-minded and experience-oriented paratelic users. As such, a telic user may be less willing to sacrifice autonomy over their private information and a paratelic may be more agreeable to the incorporation of their personal information in display ads.

H11. Internet use motivation moderates the relationship between perceived ad personalization and: (a) purchase intention, (b) perceived relevance, and (d) privacy concern such that these effects are stronger among telic users than paratelic users.

It is as well expected that the effect of ad personalization on perceived intrusiveness to be stronger among paratelic users relative to the telic user group and two reasons underlie this position. First, as the entertainment-seeking and social-connection-seeking kind (Apter, 2007), the online activities of paratelic users are typified by sporadic navigation from a webpage to another, and so, they may experience higher levels of irritation as the tendency of retailers or marketers barraging them with personalized ads may be higher. Second, although paratelic users have low goal-orientation, and intrusiveness is explained in terms of goal impediment, irritation and annoyance, they (paratelic users) still may feel greater levels of intrusion, if they are for instance, constantly exposed to an ad based on a site they visited for fun and in the spare of the moment and not necessarily because they are interested in the products on the site. Considering these arguments, it seems reasonable to hypothesize that:

H11. Internet use motivation moderates the relationship between perceived ad personalization and (c) perceived intrusiveness such that this effect is stronger among paratelic users than telic users.

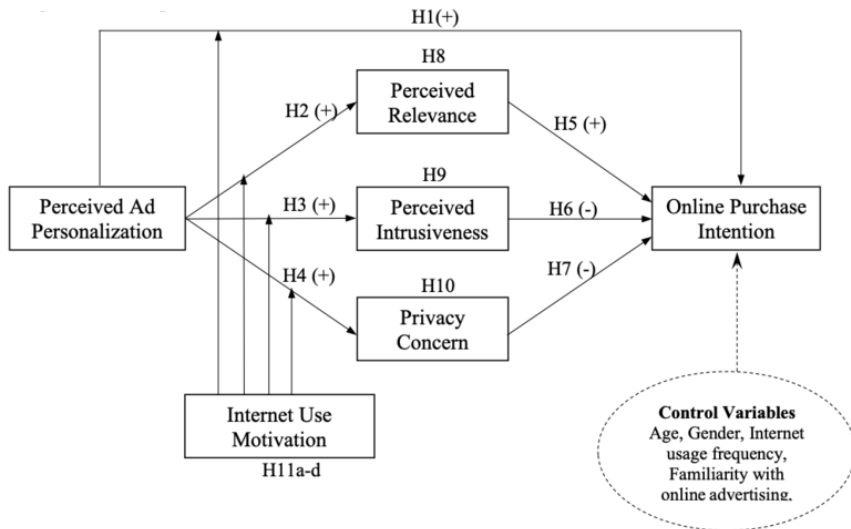
## METHODOLOGY

### Procedure and Sample Characteristics

To test the conceptual model, the study conducted an online survey using LimeSurvey. The survey link was placed on blogs, social media platforms, commercial websites and the social networking timeline of the researcher. To ensure that responses were based on display advertising, display ads were explained at the preliminary part of the questionnaire. Respondents who answered “never” to the filter question “how often do you see display ads while using the internet?” were not permitted to proceed with the survey. In order that the responses provided reflect the true perceptions of participants and to enhance validity, one attention check question was included in the questionnaire, and one scale item was repeated and reversely worded. The data collection process lasted for seven weeks spanning September to November 2019. Although, the survey link was clicked 1,514 times during the seven-week period, completed item surveys totaled 682 representing approximately, a 45 percent response rate. After screening out responses that indicated lack of participant attention, 607 cases were found usable.

Of the total respondents ( $N = 607$ ), 53.2 percent were male ( $N_{\text{male}} = 323$ ) and 46.8 percent were female ( $N_{\text{female}} = 284$ ). A majority (56.2 percent) of the respondents were below 30 years, while the remainder were within the age brackets of 30-39 (29.7 percent), 40-49 (9.2 percent), 50-59 (4.6 percent) and above 60 years (0.3 percent). Respondents with secondary education formed 10.4 percent of the sample and those with tertiary education were spread across diploma and undergraduate degree (42.3 percent), postgraduate degree (33.6 percent) and professional degree (13.7 percent). The sample also comprised 51.7 percent Ghanaians, 22.6 percent Nigerians, 13.8 percent South Africans and 11.9 percent, Kenyans. Approximately 75 percent reported high familiarity with online advertising and 85 percent reported daily use of the internet. Internet use motive showed that 20 percent ( $N_{\text{shoppers}} = 121$ ) use the internet for shopping purpose, 41.5 percent ( $N_{\text{researchers}} = 252$ ) use it primarily for research purposes, 17 percent ( $N_{\text{surfers}} = 103$ ) go online mainly to surf, and 21.5 percent ( $N_{\text{communicators}} = 131$ ) use the internet for communication purposes.

Figure 1.



## Measurements

The measurement items were adapted from prior studies and were all measured on a seven-point Likert scale (1 = “strongly disagree” and 7 = “strongly agree”). All latent variables were first order constructs including perceived ad personalization (Baek & Morimoto, 2012; Tran, 2017), perceived relevance (Kalyanaraman & Sundar, 2006), privacy concern (Dolnicar & Jordaan, 2007), perceived intrusiveness (Li et al., 2002) and online purchase intention (Shaouf et al., 2016). To measure the moderator variable (internet use motivation), respondents were asked to indicate their main motive for using the internet out of the four (shop, research, communicate and surf) espoused in the WMI classification framework (Rodgers et al., 2007). Based on the works of Jung et al. (2014) and Seyedghorban et al. (2016), respondents with shopping and researching motives were grouped as telic users and those with surfing and communication motives were grouped as paratelic users. The study also controlled for the effects of four variables – age, gender, frequency of internet usage and familiarity with online advertising – that could possibly influence the relationship among the study constructs.

## ANALYSIS AND RESULTS

### Measurement Model Estimation

The study data was analyzed using structural equation modelling (SEM) in IBM AMOS Version 23 and consistent with Anderson and Gerbing’s (1988) two-step approach, a confirmatory factor analysis (CFA) with maximum likelihood estimation was conducted followed by path analysis. To achieve acceptable fit, during the CFA, seven items in total were deleted owing to low factor loadings (Kline, 2015) after which, the model exhibited good fit: Normed chi-square,  $\chi^2/df = 2.24$ ; Goodness of Fit Index, GFI = 0.92; Adjusted Goodness of Fit Index, AGFI = 0.90; Comparative Fit Index, CFI = 0.94; Tucker-Lewis Index, TLI = 0.91; Root Mean Square Error of Approximation, RMSEA = 0.041 (Hair et al., 2017). Results for the measurement model are presented in Table 1.

Reliability of the constructs was established using composite reliability (CR) and Cronbach’s alpha ( $\alpha$ ) values which are all above the recommended 0.7 threshold (Malhotra, 2010). Construct validity (convergent and discriminant) was also determined. The average variance extracted (AVE) values

Table 1. Measurement items, factor loadings and descriptive statistics

Code	Constructs and measurement items	Loadings	Mean (SD)
	<i>Perceived ad personalization (the display ads I see online ...)</i>		
PAP1	seem to be designed specifically for me	0.82***	4.45 (1.06)
PAP2	are tailored to my shopping situation	0.73***	4.65 (1.08)
PAP3	target me as a unique individual	0.79***	4.91 (0.91)
PAP4	are related to my search history	0.81***	4.83 (0.91)
PAP5	seem to reflect my needs	0.73***	4.98 (0.95)
PAP7	seem personal to me	0.78***	4.32 (1.18)
PAP8	use my personal information	0.80***	4.24 (1.01)
	<i>Perceived relevance</i>		
PR1	I find the display ads I see online as beneficial to me	0.88***	4.34 (1.04)
PR2	The display ads I see online seem important to me	0.84***	4.03 (1.16)
PR3	I consider the display ads I see online ad useful	0.87***	4.12 (1.08)
PR4	The messages in display ads I see are meaningful to me	0.77***	4.74 (1.01)
PR6	I find the content of display ads I see personally valuable	0.82***	3.69 (1.12)
	<i>Privacy concern (when I see personalized display ads online ...)</i>		
PC1	I am concerned about my privacy	0.73***	3.14 (0.99)
PC2	I am sensitive about giving my information	0.76***	4.32 (0.92)
PC4	I am concerned about misuse of personal information	0.74***	3.96 (0.94)
PC6	I feel information is shared without permission	0.82***	3.55 (1.03)
PC7	I am concerned that businesses have too much information about me	0.84***	3.87 (1.11)
	<i>Perceived intrusiveness (I consider the personalized display ads I see as ...)</i>		
PI1	Intrusive	0.81***	4.34 (0.89)
PI2	disturbing	0.78***	4.07 (1.21)
PI4	Irritating	0.84***	4.33 (1.02)
PI5	Invasive	0.82***	4.32 (1.11)
PI6	Uncomfortable	0.76***	4.71 (0.93)
	<i>Online purchase intention (when I see personalized display ads online ...)</i>		
OPI1	I become interested in making an online purchase	0.95***	3.78 (1.01)
OPI2	I have thoughts about buying the advertised product online	0.87***	4.22 (1.04)
OPI3	I will probably purchase the advertised product online	0.85***	3.86 (0.93)

Notes: \*\*\* All factor loadings significant at  $p < 0.001$

exceeded the suggested 0.5 cut-off point (Hair et al., 2017) and the square-root of the AVEs were higher than the inter-construct correlations, thus, providing evidence of acceptable item convergence and discriminant validity respectively (Kline, 2015). Reliability and validity results are shown in Table 2.

**Table 2. Construct descriptive statistic, reliability and validity measures**

Construct	Mean	SD	CR	AVE	$\alpha$	PAP	PR	PI	PC	OPI
PAP	4.02	0.94	0.91	0.74	0.90	<i>0.86</i>				
PR	3.84	0.86	0.87	0.67	0.86	0.67	<i>0.82</i>			
PI	4.23	0.71	0.79	0.60	0.78	0.52	0.63	<i>0.77</i>		
PC	3.92	0.75	0.84	0.65	0.82	0.56	0.44	0.65	<i>0.81</i>	
OPI	4.45	0.81	0.89	0.82	0.88	0.69	0.54	0.42	0.51	<i>0.91</i>

Notes: Diagonal (italicized) values are square roots of the AVE

**Table 3. Hypothesized direct structural results**

Hypothesized path	$\beta$ -estimates	t-value	p-value	Result
H1 Ad personalization ® Online purchase intention	0.23	2.41	0.03*	Supported
H2 Ad personalization ® Perceived relevance	0.61	12.82	***	Supported
H3 Ad personalization ® Perceived intrusiveness	0.38	9.11	***	Supported
H4 Ad personalization ® Privacy concern	0.19	0.32	0.40	Unsupported
H5 Perceived relevance ® Online purchase intention	0.64	19.63	***	Supported
H6 Perceived intrusiveness ® Online purchase intention	-0.54	-4.73	***	Supported
H7 Privacy concern ® Online purchase intention	-0.07	-0.35	0.30	Unsupported
<i>Controls</i>				
Age ® Online purchase intention	0.01	0.12	0.91	
Gender ® Online purchase intention	0.19	0.14	0.32	
Usage frequency ® Online purchase intention	0.04	1.02	0.81	
Familiarity ® Online purchase intention	0.21	0.79	0.72	

Notes: \*\*\* $p < 0.001$ , \* $p < 0.05$ ,  $\chi^2/df = 2.54$ ; GFI=0.94; AGFI=0.91; CFI=0.94; TLI=0.95; RMSEA=0.06

## Hypotheses Testing

### Test of Direct and Mediating Effects

The direct and mediating relationships were tested by running two separate models. Results from the path analysis indicated that five out of the seven hypothesized direct relationships between the latent constructs were statistically significant and in the predicted direction and are presented in Table 3. As hypothesized, perceived ad personalization had a significant and positive effect on online purchase intention ( $\beta = 0.23$ ;  $p < 0.05$ ), perceived relevance ( $\beta = 0.61$ ;  $p < 0.001$ ), and perceived intrusiveness ( $\beta = 0.38$ ;  $p < 0.001$ ), in support of hypotheses 1, 2 and 3 respectively. However, perceived ad personalization did not exert any significant influence on privacy concern and so, hypothesis 4 was not supported. Also, the effect of perceived relevance and perceived intrusiveness on online purchase

intention were significant and positive ( $\beta = 0.64$ ;  $p < 0.001$ ), and significant and negative ( $\beta = -0.54$ ;  $p < 0.001$ ) as posited in hypotheses 5 and 6 respectively. Regarding privacy concern, although it had a negative effect on online purchase intention, this effect was not significant ( $\beta = -0.07$ ;  $p > 0.05$ ), and so, hypothesis 7 was not supported. In controlling for the effects of age, gender, frequency of internet usage, and familiarity with online advertising in AMOS, as suggested by Gaskin (2016), these variables were treated as exogenous variables and were regressed on online purchase intention and were also co-varied with perceived ad personalization. The results regarding the four control variables showed that they had no significant effect on consumer intentions to make online purchases.

Results of the mediation analysis using a bootstrap sample of 5000 are highlighted in Table 4. Perceived relevance was found to partially mediate the personalization – purchase intention relationship given the significant direct ( $\beta = 0.19$ ;  $p < 0.01$ ) and indirect ( $\beta = 0.28$ ;  $p < 0.001$ ) effects; and perceived intrusiveness was found to fully mediate the aforementioned relationship since the direct path was not significant, but the indirect path was significant. By these findings, support was found for *H8* and *H9* which gives weight to the assumption of the S-O-R paradigm. Nevertheless, the direct effect from perceived ad personalization to online purchase intention was not mediated by privacy concern thereby, failing to provide support for *H10*.

Table 4. Hypothesized mediation results

	Direct Effect	Indirect Effect	Result (Outcome)
<i>H8</i> PAP @ PR @ PIN	0.19**	0.28***	Partial Mediation (Supported)
<i>H9</i> PAP @ PI @ PIN	-0.23	-0.31***	Full Mediation (Supported)
<i>H10</i> PAP @ PC @ PIN	-0.05	-0.11	No Mediation (Unsupported)

Notes: \*\*\*p  $\leq$  0.001 \*\*p  $\leq$  0.01

### Test of Moderating Effects

To test the moderating effects of internet use motivation as captured in hypothesis 11, a multigroup moderation analysis was conducted. An initial step in comparing the two subgroups (telic vs. paratelic users) was to ensure the goodness of fit of the hypothetical structures between the two groups after which the study proceeded to test in a sequential manner, for configural, metric and structural invariance (Byrne, 2004). Results for the invariance tests are presented in Table 5. Following the invariance test, the full metric model was used for a path by path cross-group analysis and results showed that user mode was a significant moderator of all three tested relationships (see Table 6). Specifically, the effect of perceived ad personalization on perceived relevance was stronger for telic users ( $\beta = 0.60$ ;  $p < 0.001$ ) than paratelic users ( $\beta = 0.21$ ;  $p < 0.001$ ) as such, hypothesis 11b is supported. Also, perceived ad personalization had a significant positive effect on perceived intrusiveness among paratelic users ( $\beta = 0.47$ ;  $p > 0.05$ ), but this effect was not significant among telic users ( $\beta = 0.08$ ;  $p < 0.001$ ), and this provides partial support for hypothesis 11c. However, contrary to our hypothesized projection (H11a), the effect of ad personalization on online purchase intention was stronger for paratelic users ( $\beta = 0.36$ ;  $p < 0.001$ ) than for telic users ( $\beta = 0.25$ ;  $p < 0.001$ ).

## DISCUSSION AND CONCLUSIONS

The general pattern of results from this study, provide support for the hypothesized effects and underpinning theories. Consistent with prior studies (e.g. Zhu & Chang, 2016; Jung, 2017), perceived

**Table 5. Multigroup analysis: invariance testing of model**

	$\chi^2$	df	$\chi^2/df$	NFI	TLI	GFI	CFI	RMSEA	$\Delta\chi^2$ test
	--	--	£ 3	³0.93	³0.93	³0.93	³0.93	£ 0.08	$p > 0.05$
Telic users	42.36	16	2.65	0.94	0.95	0.93	0.97	0.07	
Paratelic users	37.12	16	2.32	0.94	0.96	0.93	0.97	0.06	
Configural invariance	78.27	32	2.45	0.94	0.96	0.93	0.97	0.05	
Metric invariance	84.02	38	2.21	0.94	0.96	0.93	0.97	0.05	0.45
Structural invariance	88.10	39	2.16	0.94	0.97	0.93	0.97	0.04	0.04*

Notes: \*Structural invariance is not achieved and so, the paths should not be constrained.

**Table 6. Multigroup moderation - Internet use motivation**

Hypothesized paths	Telic users			Paratelic users		
	$\beta$	$t$	Sig.	$\beta$	$t$	Sig.
H11a Ad personalization ® Purchase intention	0.25	3.42	***	0.36	4.03	***
H11b Ad personalization ® Perceived relevance	0.60	5.32	***	0.21	2.34	***
H11c Ad personalization ® Perceived intrusiveness	0.08	1.01	0.44	0.47	6.17	***

Notes: \*\*\* p £ 0.001

ad personalization was found to influence directly (although weak), online purchase intention and also indirectly through perceived relevance. The partial mediation result show that the effect of personalization on purchase intention does not only occur through perceived relevance, which diverges from the usual perspective in earlier studies (e.g. De Keyzer et al., 2015). The results also established a negative influence of ad personalization on online purchase intention through perceived intrusiveness, suggesting that intentions to make online purchase of an advertised product, are diminished when consumers perceived the personalized ad as distracting, invasive, irritating or disturbing. These feelings of annoyance and discomfort may be explained in terms of the level of familiarity with the advertiser and the degree to which the ad is related to viewers main activity (Milne et al., 2004; Bleier & Eisenbeiss, 2015a). Essentially, in support of van Doorn and Hoekstra (2013), the negative influence of personalization on online purchase intention as indicated by findings in this study, only manifest insofar as consumers perceive the ad as intrusive.

The findings concerning privacy concern were quite unexpected and two probable explanation for this lack of effects are considered. First, the extent to which a personalized ad may generate privacy concerns hinges on the degree of personal information used in the ad (Baek & Morimoto, 2012) as it demonstrates how closely the advertiser is watching as well as how much the advertiser knows about the consumers' activities. Given that the study took an expansive approach to measuring perceived ad personalization (which is considered a limitation), it made it challenging to establish a link between it, privacy concern and consumers' intentions to purchase. Second, it is possible that the benefit consumers derive from their exposure to personalized ads makes them discount threats to their privacy. Debatin et al. (2009) demonstrated this in the context of Facebook users, who were found to have a laidback attitude toward privacy invasion since the seeming fulfilment of using the platform outweighs any perceived privacy concern.

The study also established variations in most of the hypothesized personalization effects. Particularly, the effect of ad personalization on perceived relevance was stronger for telic users. That is, people with information-seeking and shopping motivation are more likely to find as useful and personally relevant, ad messages that are tailored to their interest and preferences and make recommendations matching their shopping and/or search needs, as such ads could help them complete their task or achieve their goals. The amount of information consumers can assess on the internet is substantial, and for the goal directed user who is focused on the end rather than the means (Seyedghorban et al., 2016), the need for self-relevance of ads to aid their task completion, becomes much more pronounced.

Further, the effect of ad personalization on perceived intrusiveness was significant only among paratelic users. In providing a probable explanation for this finding, this study suggests that for the paratelic group, their online activities are characterized by spontaneity which sees them moving from website to website without any defined goal. For this reason, the tendency of paratelic users (surfers and socializers) spending more time on the internet and visiting more sites is higher. Correspondingly, the likelihood that they may be presented with more personalized ads while online is also higher. This is so, because retailers integrate information from several sources including social media activities, emails, search queries, shopping behaviors etc. (Tucker, 2014; Li, 2016) into their personalized ads. As such, paratelic users may experience higher levels of irritation and annoyance driven by exposure to numerous ads that are supposedly tailored to their interests and online behaviors. Such feeling may also be driven by the fact that they were not expecting to receive ads from a particular advertiser. It is as well reasoned that telic users who are mostly conducting directed (task-driven) search, find personalized ads as advertisers trying to reach them rather than as hindrances to their online activities. Although, the results concerning purchase intention are fairly surprising, the study proposes that it is the impulsive and “living in the present” characteristic of the paratelic users that drive their purchase intentions when exposed to personalized ads, relative to the telic users.

## **Implications of the Study**

The study findings proffer some theoretical contributions. First, by establishing that internet usage motive moderates the effect of ad personalization on perceptions of relevance and intrusiveness as well as purchase intention, this study makes a modest contribution to the ad personalization literature and also to advertising practice, as it clarifies one of the circumstances under which personalization may be more or less effective. Second, this study lends credence to the central premise of the S-O-R paradigm, and also confirms the assumptions of the telic/paratelic meta-motivational states in the context of personalized advertising. Third, with the broadening international scope of business activities, emerging markets are said to offer great growth opportunity for firms and leading consumer brands entering these markets. By examining personalization effects in these settings, this study might serve as a basis for understanding other emerging consumer markets and aid advertisers and retailers seeking to reach out to consumers in these markets through their ads.

Practically, the variation in the personalization effects among the internet user groups, calls for retailers and marketers to understand these differences within their target segments and adjust their personalization strategies appropriately. The insights offered by these findings suggest that it is worthwhile to account for consumers' motive for internet usage in the design and execution of personalized display ads to enhance receptivity and positive responses. For instance, personalized ads presented to surfers and socializers should be based on repeated activities and website visits rather than erratic browsing. The issue of placement, suitable timing and explanation for the ad also becomes even more critical given the user motive differences. While it will be useful for a paratelic user to be presented with a personalized ad about a destination, because he/she had earlier checked some vacation destinations, it will be much more meaningful if exposure occurs at a time the user is browsing such websites again. This may require deeper knowledge and understanding of the preferences of users who mostly surf and socialize relative to the information seekers and researchers

because they engage in a lot of experiential browsing and provide copious amounts of information which makes it a bit challenging to identify their precise preferences and interest.

This study has limitations that should be considered when interpreting the findings and should also serve as recommendations for future research. First, the study was based on a survey which does not account for true causalities among the hypothesized factors. In order to compensate for this shortfall, future studies could consider employing experimental designs. Also, this study conducted an expansive examination of personalization in the context of display advertising through self-reporting, which limits the external validity of the study. Because in actuality, display ads vary in format, and the extent of ad personalization varies as well, future research using experimental methods could also use various forms of display ads personalized with different breadth and depth and at a group-level or individual-level in order to provide a more comprehensive insight on the different effects of the varying degrees of personalization.

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